

delivery vector and the DNA delivered specifically to tumor tissues under anaerobic conditions is expressed in the tumor tissues.

4. (Amended) The method as claimed in Claim 3, wherein the DNA is selected from the group consisting of:

- (a) DNA coding for a protein having an antitumor activity, and
- (b) DNA coding for a protein having an activity of converting a precursor of an antitumor substance into the antitumor substance.

12. (Amended) The method as claimed in any one of Claims 3 to 11, wherein the bacterium is *Bifidobacterium longum*.

13. (Amended) The method as claimed in any one of Claims 3, 4 or 6 to 11, wherein the bacterium is *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

14. (Amended) A method for expressing a gene coding for a protein having an antitumor activity in tissue tumors specifically, which comprises use of the bacterium as claimed in any one of Claims 3 to 5 or 8 to 11.

15. (Amended) A method for expressing a gene coding for a protein having the activity of converting a precursor of an antitumor substance into the antitumor substance in tissue tumors

specifically, which comprises use of the bacterium as claimed in any one of Claims 3, 4 or 6 to 11.

16. (Amended) A pharmaceutical composition comprising the bacterium as claimed in any one of Claims 3 to 11.

17. (Amended) A pharmaceutical composition comprising a combination of the bacterium as claimed in any one of Claims 3, 4 or 6 to 11 and the precursor of an antitumor substance.

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18. (Amended) A pharmaceutical composition comprising the bacterium as claimed in any one of Claims 3, 4 or 6 to 11 and the precursor of an antitumor substance.

19. (Amended) The pharmaceutical composition as claimed in Claim 16, wherein the bacterium is *Bifidobacterium longum*.

20. (Amended) The pharmaceutical composition as claimed in Claim 19, wherein bacterium is *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

21. (Amended) A bacterium belonging to the genus *Bifidobacterium*, which is used in the method as claimed in any one of Claims 3 to 11.

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22. (Amended) A bacterium *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

24. (Amended) A method of treating a solid tumor, which comprises use of the method as claimed in any one of Claims 3 to 11.

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25. (Amended) A method of treating a solid tumor, which comprises administering the bacterium as claimed in any one of Claims 3, 4 or 6 to 11 in combination with the precursor of an antitumor substance.

Please add the following new claims.

28. A method of specifically delivering to tumor tissues under anaerobic conditions a genetically modified bacterium, wherein the genetically modified bacterium is a *Bifidobacterium longum*, which comprises a DNA sequence coding for a protein.

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29. The method as claimed in Claim 28, wherein the DNA sequence codes for a protein having anti-tumor activity.

30. The method as claimed in Claim 28, wherein the genetically modified bacterium comprises an expression vector comprising a DNA sequence coding for a protein.